

AMENDMENTS TO THE CLAIMS

The following is a complete listing of the claims indicating the current status of each claim and including amendments currently entered as highlighted.

1-25 (canceled)

26. (new) A system for electrochemical assay of nitro-aromatic compounds, comprising:

(a) a working electrode having a surface modified by a monomeric amino-aromatic compound by treatment thereof with said monomeric amino-aromatic compound dissolved in an organic polar solvent.

17. (new) The system, according to claim 26 wherein said monomeric amino-aromatic compound is selected from the group consisting of alkyl-aniline compounds, halide derivatives of alkyl-aniline compounds and hydroxyl- aniline compounds.

28. (new) The system, according to claim 26, wherein said monomeric amino-aromatic compound is selected from the group consisting of phenylene-diamine, diphenylene-diamine, and diphenylene-triamine.

29. (new) The system, according to claim 26, wherein said monomeric amino-aromatic compound is aniline.

30. (new) The system, according to claim 26, wherein said organic polar solvent is a polar aprotic solvent.

31. (new) The system, according to claim 26, wherein said organic polar solvent is dimethylsulfoxide.

32. (new) The system, according to claim 26 wherein said monomeric amino-aromatic compound is in a range of one to five per cent solution in said organic polar solvent.

33. (new) The system, according to claim 26, wherein said working electrode includes at least one element selected from the group consisting of carbon and gold.

34. (new) The system, according to claim 26, wherein said working electrode includes submicron particles.

35. (new) The system, according to claim 26, wherein said working electrode includes elemental gold deposited on carbon, wherein the gold is of average thickness less than one nanometer.

36. (new) The system, according to claim 26, wherein said working electrode includes carbon paper.

37. (new) The system, according to claim 26, further comprising,

(b) an electrolyte for dissolving the nitro-aromatic compounds;
wherein said electrolyte is a mixed solvent including water and an organic solvent.

38. (new)

The system, according to claim 37, further comprising

(c) a mechanism for inputting air suspected to include the nitro-aromatic compounds, into said electrolyte in order to dissolve the nitro-aromatic compounds in said electrolyte.

39. (new) The system, according to claim 39, wherein said organic solvent is selected from the group consisting of aprotic solvents, and organic dipolar solvents.

40. (new) The system, according to claim 39, wherein said organic solvent is selected from the group consisting of dimethylformamide, acetonitrile, propylene carbonate.

41. (new) The system, according to claim 39, wherein said organic solvent is selected from the group consisting of ethanol, propanol, ethylene-glycol, and propylene-glycol.

42. (new) The system, according to claim 39, wherein said electrolyte has a pH greater than 8.

43. (new) The system, according to claim 39, wherein said electrolyte has a pH greater than 7.

44. (new) The system, according to claim 26, further comprising,

(b) an electrolyte for dissolving the nitro-aromatic compounds;
wherein said electrolyte is a mixed solvent including a water buffer of pH greater than 8, ethanol and acetonitrile.

45. (new) A system for electrochemical assay of nitro-aromatic compounds, comprising:

(a) a working electrode having a surface of carbon and gold, wherein said surface is modified by a monomeric amino-aromatic compound by treatment thereof with said monomeric amino-aromatic compound dissolved in an organic polar solvent.